



## Climate change and emergency medicine: Impacts and opportunities

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### Abstract:

There is scientific consensus that the climate is changing, that human activity plays a major role, and that the changes will continue through this century. Expert consensus holds that significant health effects are very likely. Public health and health care systems must understand these impacts to properly pursue preparedness and prevention activities. All of medicine will very likely be affected, and certain medical specialties are likely to be more significantly burdened based on their clinical activity, ease of public access, public health roles, and energy use profiles. These specialties have been called on to consider the likely impacts on their patients and practice and to prepare their practitioners. Emergency medicine (EM), with its focus on urgent and emergent ambulatory care, role as a safety-net provider, urban concentration, and broad-based clinical mission, will very likely experience a significant rise in demand for its services over and above current annual increases. Clinically, EM will see amplification of weather-related disease patterns and shifts in disease distribution. In EM's prehospital care and disaster response activities, both emergency medical services (EMS) activity and disaster medical assistance team (DMAT) deployment activities will likely increase. EM's public health roles, including disaster preparedness, emergency department (ED)-based surveillance, and safety-net care, are likely to face increasing demands, along with pressures to improve fuel efficiency and reduce greenhouse gas emissions. Finally, EM's roles in ED and hospital management, particularly related to building and purchasing, are likely to be impacted by efforts to reduce greenhouse gas emissions and enhance energy efficiency. Climate change thus presents multiple clinical and public health challenges to EM, but also creates numerous opportunities for research, education, and leadership on an emerging health issue of global scope.

**Source:** <http://dx.doi.org/10.1111/j.1553-2712.2009.00469.x>

### Resource Description

#### Exposure : ☐

weather or climate related pathway by which climate change affects health

Air Pollution, Ecosystem Changes, Extreme Weather Event, Food/Water Security, Human Conflict/Displacement, Precipitation, Sea Level Rise, Temperature

**Air Pollution:** Allergens, Ozone

**Extreme Weather Event:** Drought, Hurricanes/Cyclones, Wildfires

**Food/Water Security:** Food Access/Distribution, Nutritional Quality

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**Temperature:** Extreme Heat, Fluctuations

**Geographic Feature:** ☒

resource focuses on specific type of geography

Arctic, Desert, Ocean/Coastal, Urban

**Geographic Location:** ☒

resource focuses on specific location

United States

**Health Co-Benefit/Co-Harm (Adaption/Mitigation):** ☒

specification of beneficial or harmful impacts to health resulting from efforts to reduce or cope with greenhouse gases

A focus of content

**Health Impact:** ☒

specification of health effect or disease related to climate change exposure

Cardiovascular Effect, Infectious Disease, Injury, Mental Health/Stress, Morbidity/Mortality, Respiratory Effect, Other Health Impact

**Cardiovascular Effect:** Other Cardiovascular Effect

**Cardiovascular Disease (other):** Acute coronary syndrome

**Infectious Disease:** Airborne Disease, Foodborne/Waterborne Disease, Vectorborne Disease, Zoonotic Disease

**Airborne Disease:** Coccidioidomycosis (Valley Fever)

**Foodborne/Waterborne Disease:** General Foodborne/Waterborne Disease, Other Diarrheal Disease

**Foodborne/Waterborne Disease (other):** Gastroenteritis

**Vectorborne Disease:** General Vectorborne, Mosquito-borne Disease, Tick-borne Disease

**Mosquito-borne Disease:** Dengue, Malaria, Viral Encephalitis, West Nile Virus

**Tick-borne Disease:** Lyme Disease, Rocky Mountain Spotted Fever

**Zoonotic Disease:** General Zoonotic Disease, Hantavirus Pulmonary Syndrome

**Mental Health Effect/Stress:** Mood Disorder

**Respiratory Effect:** Asthma, Chronic Obstructive Pulmonary Disease

**Other Health Impact:** Heat stroke

**Medical Community Engagement:** ☒

resource focus on how the medical community discusses or acts to address health impacts of climate change

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## **Mitigation/Adaptation:**

mitigation or adaptation strategy is a focus of resource

Adaptation, Mitigation

## **Population of Concern:** A focus of content

## **Population of Concern:**

populations at particular risk or vulnerability to climate change impacts

Elderly, Low Socioeconomic Status

**Other Vulnerable Population:** Infants; Overweight; Pre-existing medical conditions; Socially isolated

## **Resource Type:**

format or standard characteristic of resource

Review

## **Resilience:**

capacity of an individual, community, or institution to dynamically and effectively respond or adapt to shifting climate impact circumstances while continuing to function

A focus of content

## **Timescale:**

time period studied

Time Scale Unspecified